CLAIMS:

1. A rotary positive displacement machine comprising:

a casing having a circular cylindrical internal surface delimiting an operating chamber;

an orbiting piston in the operating chamber, the orbiting piston being mounted so as to orbit about a chamber axis which is the axis of the said internal surface, the orbiting piston having a circular cylindrical external surface, the chamber axis passing through the orbiting piston, a generatrix of the external surface being adjacent to the said internal surface, and a diametrically opposite generatrix being spaced from the said internal surface;

a vane member mounted on the casing, the vane member having a tip face which faces the external surface of the orbiting piston and which has a length substantially equal to that of the orbiting piston; and

a linkage which connects the vane member to the orbiting piston so as to keep the tip face of the vane member adjacent the external surface of the orbiting piston;

wherein at least one of the said external and internal surfaces is provided with individual compliant strips which are distributed around the said one surface, run parallel to one another, and project above the said one surface.

2. A machine as claimed in claim 1, in which each compliant strip narrows towards the other of the said external and internal surfaces.

3. A machine as claimed in claim 1 or 2, in which each complaint strip has a land at a level above the said one surface.

4. A machine as claimed in any preceding claim, in which each compliant strip is mounted in and protrudes from a groove in the said one surface.

5. A machine as claimed in claim 4, in which the groove and the compliant strip widen beneath the said one surface.

6. A machine as claimed in claim 4 or 5, in which the edges of the groove are chamfered.

7. A machine as claimed in any of claims 4 to 6, in which the cross-sectional area of the groove is substantially equal to or greater than the cross-sectional area of the compliant strip.

8. A machine as claimed in any preceding claim, in which each compliant strip is made of an elastomer.

9. A machine as claimed in any preceding claim, in which only one of the said external and internal surfaces is provided with the said compliant strips.

10. A machine as claimed in any preceding claim, in which the said one surface is the external surface of the orbiting piston.

11. A machine as claimed in any of claims 1 to 8, in which both of the said external and internal surfaces are provided with the said compliant strips.

12. A machine as claimed in any preceding claim, in which the distribution of the compliant strips is such that there is at least one of the compliant strips in contact with the other surface over the majority of the orbit of the orbiting piston.

13. A machine as claimed in any preceding claim, in which the orbiting piston comprises a non-rotating outer part and a rotating inner part.

14. A machine as claimed in claim 13, in which the outer part comprises an extruded body.

15. A machine as claimed in any preceding claim, including a disc at one end of the orbiting piston, the disc rotating about the chamber axis in synchronism with the orbiting piston and delimiting one end of the operating chamber.

16. An assembly comprising a first rotary positive displacement machine according to any preceding claim and a second rotary positive displacement machine.

17. An assembly as claimed in claim 16, in which the two machines are fixed end-to-end and have a common axis.

18. An assembly as claimed in claim 16, in which the two machines are arranged side-by-side with parallel axes.